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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,132

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Robert Chassagnon

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EXAMINER

MAKI, STEVEN D

ART UNIT

PAPER NUMBER

1791

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/578,132	CHASSAGNON ET AL.	
	Examiner	Art Unit	
	Steven D. Maki	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6,7 and 9-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,7 and 9-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 May 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>052209</u> . | 6) <input type="checkbox"/> Other: _____ |

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- 1) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

- 2) Claims 1-4, 6-7 and 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the scope and meaning of "before the tire is used" and "the time before the tire is used" is ambiguous. One of ordinary skill in the art is not reasonably appraised of the scope of protection afforded by this language. It is unclear if "before the tire is used" is referring to a new tire, a worn tire having a new retread, a worn tire driven for the first time after reaching 1000 miles, etc.

In claim 1, the description of "the at least one base mix extends to the contact face from the time before the tire is used until, at the latest, after wear is up to 10% of the height Hr of the covering mix" makes no sense and is confusing. The condition(s) under which the base mix extends to the contact face is uncertain. It is unclear if "from the time before the tire is used" is redundant to "at the latest, after wear is up to 10% of the height Hr of the covering mix". On page 7 of the response filed 5-22-09, applicant states: "Claims 1-3 have been amended to remove informalities ... without narrowing the scope of any claims or any elements therein." It is uncertain if this statement is inconsistent with lines 17-19 of amended claim 1.

Claim 11 ambiguously refers to "ester". In claim 11, it is suggested to change "ester" to --the fatty acid ester type--.

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3) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4) Claims 1-4, 6-7 and 9-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 1, the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the new matter) is "the at least one base mix extends to the contact face from the time before the tire is used until, at the latest, after wear is up to 10% of the height Hr of the covering mix". The original specification teaches "at least one base mix opens on to the contact face when new or at the latest after wear at most equal to 10% of the height Hr" (emphasis added) instead of "the at least one base mix extends to the contact face from the time **before** the tire is used **until**, at the latest, after wear is up to 10% of the height Hr of the covering mix" (emphasis added). The former describes two different conditions whereas the latter describes a range for a single condition. Also, the original disclosure fails to define "the tire is used". The subject matter of "the at least one base mix extends to the contact face from the time before the tire is used until, at the latest, after wear is up to 10% of the height Hr of the covering mix" (which makes no sense)

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redefines the invention in a manner not contemplated by the inventor at the time the original disclosure was filed.

5) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Matsumoto et al (covering grooves and tread surface)

6) **Claims 1-4, 6 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al (US 6,035,911) in view of Japan 712 (JP 09-099712) and in view of at least one of Japan 935 (JP 63-039935), Japan 311 (JP 2002-275311) and Hausmann (US 5,252,649).**

Matsumoto et al discloses a pneumatic tire for a passenger car having a tread comprising a surface layer 7c (covering mix) and a base portion 7b (base mix). See Figure 1, col. 2 lines 4-6). The tread has grooves and tread elements (Figures 1 and 2). The surface layer portion 7c (covering mix) comprises one or more rubbers, a reinforcing agent and 1-20 parts fluorine based additive (col. 2 lines 15-23, 32-44). The one or more rubbers may be **isoprene-isobutylene copolymer rubber (butyl rubber)**. See col. 2 lines 15-23. The reinforcing agent may be silica (col. 2 lines 45-49) The tire has excellent drainage when run at high speed on wet road surface and excellent steering stability when run at high speed on dry road surface. Matsumoto et al teaches using aromatic oil in the surface layer 7c (covering mix). See Table 1 and Table 2.

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Matsumoto et al does not recite using unsaturated C12-C22 fatty acid ester type in the surface layer 7c (covering mix).

As to claims 1-4 and 11, it would have been obvious to one of ordinary skill in the art to include an amount such as 5-80 parts (claim 2), 15-30 parts (claim 3) or 10-50 parts (claim 11) unsaturated C12-C22 fatty acid ester type (claim 1) such as glycerol trioleate (claim 3) in the surface layer 7c (covering mix) of Matsumoto et al's pneumatic passenger car tire having excellent drainage on wet road surface and excellent steering stability on dry road surface since (1) Japan 935 suggests using 1-150 parts (or 5-30 parts) plasticiser in a tire tread for use on ice and snow because it *prevents hardening of the tread due to decreased Tg to improve running performance on ice and snow* wherein (a) the tire tread comprises rubber such as **butyl rubber** and (b) the plasticiser is a glycerine ester of formula I (page 1 lower left) where R1, R2, R3 = H or 2-22C acryl (abstracts, formula at page 1 lower left, ranges of "1-150" and "5-30" on page 2 lower left, invention examples 1-7 in Table 1 and invention examples 8-14 in Table 2), (2) Japan 311 teaches formulating a tire tread such that it comprises 100 parts rubber such as **butyl rubber**, 10-130 parts silica, silane coupling agent and 0.2-10 parts organic compound such as fatty acid ester so that *the composition is excellent in workability, dimensional stability and safety and the tire is excellent in uniformity* (abstract, paragraphs 1, 43-44, 50-70, 83 of machine translation) and/or (3) Hausmann suggests including 2-35 parts plasticizer comprising fatty acid triglyceride such as triglyceride of oleic acid (glycerol trioleate) in the tread which may comprise **butyl rubber** to *improve traction on ice and snow as well as dry and wet roads* (abstract, col.

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3 lines 38-48). Hence, Matsumoto et al, Japan 935, Japan 311 and Hausmann teach tread material comprising rubber and plasticiser. At least one of Japan 935, Japan 311 and Hausmann provide ample motivation (e.g. improved traction) to use the claimed unsaturated C12-C22 fatty acid ester type ("plasticiser") in Matsumoto et al's tread comprising surface layer portion 7c and base portion 7b. The applied secondary prior art to at least one of Japan 935, Japan 311 and Hausmann provides a reasonable expectation of success since each of Japan 935, Japan 311 and Hausmann teach using both butyl rubber and fatty acid ester (plasticiser) in a tire tread.

Since Matsumoto et al's surface layer portion 7c (covering mix) covers the entire groove surface, the surface layer portion 7c (covering mix) extends, when the tread is new, over a height H_r at least equal to 30% of the height H of the face of the tread pattern element.

With respect to the limitation regarding at most equal to 10% of the height H_r , it would have been obvious to one of ordinary skill in the art to provide the surface layer 7c (covering mix) of Matsumoto et al's passenger car tire such that, after wear at most equal to 10% (up to 10%) of the height H_r , the base portion 7b (base mix) is exposed and thereby opens on to the contact face since (1) Japan 712, also directed to a passenger car tire, suggests forming a surface layer 1 (covering mix) containing a fluorine based resin with a thickness t_c of less than 10% of the thickness t_G of the tread 2 (base mix) such as 0.5 mm to 1 mm (abstract, machine translation) and optionally (2) it is taken as well known / conventional per se in the tire tread art to provide grooves of a passenger car tire with a depth of about 6-8 mm. Japan 712's disclosure of thickness

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for a surface layer is applicable to Matsumoto et al since the surface tread layer of Matsumoto and the surface layer of Japan 712 each comprise a fluorine based resin. Example: If the covering mix is 0.5 mm and the groove depth is 6 mm, then the covering mix wears so as to expose the base mix at 8.3% ($0.5 \text{ mm} / 6 \text{ mm} \times 100\%$). The value 8.3% falls within the range of at most 10%.

As to claim 6, Matsumoto et al teaches using 100 parts isobutylene isoprene copolymer rubber (butyl rubber). See col. 2 lines 15-23.

As to claim 9, Matsumoto et al teaches a tire with a tread.

As to claim 10, Matsumoto et al's tread comprises grooves.

7) Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al (US 6,035,911) in view of Japan 712 (JP 09-099712) and in view of at least one of Japan 935 (JP 63-039935), Japan 311 (JP 2002-275311) and Hausmann (US 5,252,649) as applied above and further in view of Japan 701 (JP 2000-153701).

As to claim 7, it would have been obvious to one of ordinary skill in the art to provide the base mix 7b of Matsumoto et al's passenger car tire such that it is devoid of butyl rubber since Japan 701, which teaches covering a groove with a butyl rubber layer to prevent belt failure, suggests providing a base mix 1 of a passenger car tire such that it comprises crude rubber (natural rubber), styrene butadiene rubber, polybutadiene rubber, polyisoprene rubber or a mixture thereof (paragraph 5 of machine translation). Butyl rubber is not one of the disclosed rubbers for the tread 1 (base mix). See paragraph 5 of machine translation of Japan 701.

Japan 701 (groove bottom and sidewalls covered)

8) **Claims 1-4, 6-7 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 701 (JP 2000-153701) in view of at least one of Japan 935 (JP 63-039935), Japan 311 (JP 2002-275311) and Hausmann (US 5,252,649).**

Japan 701 discloses a passenger car tire having a tread 1 comprising a major groove 2 separating tread elements (Figure 1). Japan 701 is silent as to using a plurality of grooves. However, it would have been obvious to one of ordinary skill in the art to provide Japan 701's tread with a plurality of cutouts (claim 1) in the form of grooves (claim 10) defining a plurality of tread elements since it is taken as well known / conventional per se in the tire tread art to provide the tread of a pneumatic passenger car tire with circumferential grooves and lateral grooves and blocks defined by those grooves in order to improve wet traction of the tire. The tread 1 (base mix) comprises crude rubber (natural rubber), styrene butadiene rubber, polybutadiene rubber, polyisoprene rubber or a mixture thereof (paragraph 5). In other words, the tread is devoid of butyl rubber. Japan 701 teaches preventing belt failure by covering at least the groove bottom with a covering rubber layer 3. The covering rubber layer 3 comprises **isobutylene isoprene rubber (butyl rubber)**. See paragraph 5 of machine translation. Japan 701 teaches covering only the groove bottom with the covering rubber layer. See Figure 1 and Example 1 (paragraph 9 of machine translation). Japan 701 also teaches covering all of the groove bottom and groove sidewalls with the covering rubber layer (paragraph 12 of machine translation). Japan 701 does not recite using unsaturated C12-C22 fatty acid ester type in the surface layer 7c (covering mix).

As to claims 1-4 and 11, it would have been obvious to one of ordinary skill in the art to include an amount such as 5-80 parts (claim 2), 15-30 parts (claim 3) or 10-50 parts (claim 11) unsaturated C12-C22 fatty acid ester type (claim 1) such as glycerol trioleate (claim 3) in the covering rubber layer 3 (covering mix) of Japan 701's pneumatic passenger car tire since (1) Japan 935 suggests using 1-150 parts (or 5-30 parts) plasticiser in a tire tread for use on ice and snow because it *prevents hardening of the tread due to decreased Tg to improve running performance on ice and snow* wherein (a) the tire tread comprises rubber such as **butyl rubber** and (b) the plasticiser is a glycerine ester of formula I (page 1 lower left) where R1, R2, R3 = H or 2-22C acryl (abstracts, formula at page 1 lower left, ranges of "1-150" and "5-30" on page 2 lower left, invention examples 1-7 in Table 1 and invention examples 8-14 in Table 2), (2) Japan 311 teaches formulating a tire tread such that it comprises 100 parts rubber such as **butyl rubber**, 10-130 parts silica, silane coupling agent and 0.2-10 parts organic compound (plasticiser) such as fatty acid ester so that *the composition is excellent in workability, dimensional stability and safety and the tire is excellent in uniformity* (abstract, paragraphs 1, 43-44, 50-70, 83 of machine translation) and/or (3) Hausmann suggests including 2-35 parts plasticizer comprising fatty acid triglyceride such as triglyceride of oleic acid (glycerol trioleate) in the tread which may comprise **butyl rubber** to *improve traction on ice and snow as well as dry and wet roads* (abstract, col. 3 lines 38-48). Hence, at least one of Japan 935, Japan 311 and Hausmann provide ample motivation (e.g. improved workability or improved traction) to use the claimed unsaturated C12-C22 fatty acid ester type ("plasticiser") in Japan 701's

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tread. It is noted that Japan 701's covering layer 3 contacts the road when the groove sidewalls and bottom are covered. The applied secondary prior art to at least one of Japan 935, Japan 311 and Hausmann provides a reasonable expectation of success since each of Japan 935, Japan 311 and Hausmann teach using both butyl rubber and fatty acid ester (plasticiser) in a tire tread.

With respect to "at least one base mix opens on to the contact face when new or at the latest after wear at most equal to 10% of the height H_r " (claim 1), Japan 701 satisfies this limitation because Japan 701 teaches covering the sidewalls and bottom of the groove instead of the tread surface.

With respect to the limitation regarding at least equal to 30%, it would have been obvious to one of ordinary skill in the art to cover Japan 701's groove with the covering rubber layer comprising isobutylene isoprene rubber (butyl rubber) such that the covering layer (butyl rubber layer) extends over a height H_r at least equal to 30% of the height H of the face of the tread pattern elements since Japan 701 teaches covering both the bottom and sidewalls of the groove 2 with the butyl rubber covering layer to prevent moisture from moving from the groove to the belt to prevent belt failure. It is noted again that Japan 701's covering layer 3 contacts the road when the groove sidewalls and bottom are covered.

As to claim 6, Japan 701 teaches using 100 parts isobutylene isoprene copolymer rubber (butyl rubber). See abstract, paragraph 5, 7 of machine translation.

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As to claim 7, Japan 701 teaches a tread 1 (base mix) which is devoid of butyl rubber. Butyl rubber is not one of the disclosed rubbers for the tread 1 (base mix). See paragraph 5 of machine translation of Japan 701.

As to claim 9, Japan 701 teaches a tire with a tread.

Remarks

9) Applicant's arguments with respect to claims 1-4, 6-7 and 9-11 have been considered but are moot in view of the new ground(s) of rejection.

10) No claim is allowed.

11) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven D. Maki/
Primary Examiner, Art Unit 1791

Steven D. Maki
July 29, 2009